WILDCAT

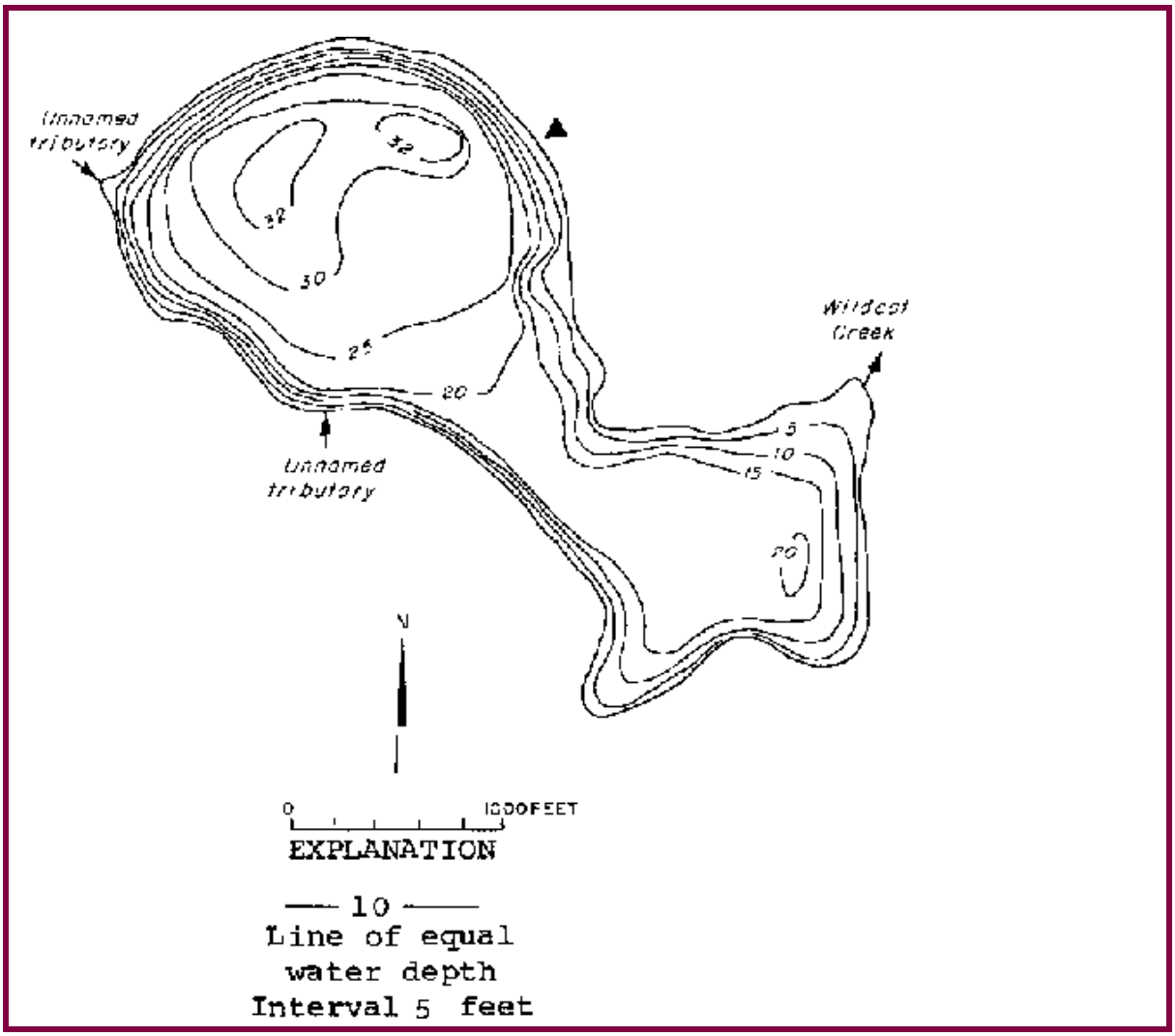
KITSAP County

Lake ID: WILKI1

Ecoregion: 2

Wildcat Lake is located six miles northwest of Bremerton. It is fed by two inlets, and drains via Wildcat Creek to Dyes Inlet.

Area (acres)	*Maximum Depth (ft)*	*Mean Depth (ft)*	*Drainage (sq mi)*	
120	33	18	3	
Volume (ac-ft)	***Shoreline (miles)***	***Altitude (ft abv msl)***	***Latitude***	***Longitude***
2200	2.24	377	47 35 59.	122 45 35.



Station Information

WILKI1

Secondary Station	Station # 1	latitude: 47 35 56.9	longitude: 122 46 23.8
	Description:	Approximately 200 feet from boat launch on a line extending from launch to southern tributary; pre-1996 data	
Primary Station	Station # 2	latitude: 47 35 48.1	longitude: 122 45 40.2
	Description:	Deep part of lake, in the approximate center of a line extending from northwest tributary to boat launch; post-1996 data	
Secondary Station	Station # 3	latitude:	longitude:
	Description:	In southeast portion of lake in the approximate middle of a line extending from the narrowest point in the lake to the southeasternmost end of shore	

Trophic State Assessment for 1998

WILDCAT

Analyst: KIRK SMITH

TSI_Secchi:	36
TSI_Phos:	33
TSI_Chl:	35
Narrative TSI:[a]	O

Wildcat Lake is an oligotrophic lake on the Kitsap peninsula. The watershed is about 75% forested, 15% residential, and 10% agriculture. The water is very clear and supports a put-and-take trout fishery and a bass fishery. There were no user surveys distributed on Wildcat Lake so we cannot determine the full extent of the uses and the public perception of their quality. However, besides the fishery, there is a public swimming beach on the lake. There is a speed limit for boats; no wakes are allowed. The habitat survey revealed buildings and lawns to be the most prominent human disturbances along the shoreline as is the case on most urban lakes. Aquatic vegetation was sparse which is not supportive of the bass fishery. The watershed survey revealed an area where a tributary was impacted by grazing livestock. Most of the lawns near the lake appeared to be well manicured and could be a source of nutrients from fertilizers. The lake is quite clear and low in phosphorus (mean total phosphorus was 7.7 ug/L). With little vegetation and low productivity, a bass fishery is most likely not supported in this lake. Zooplankton tended to be small with copepods dominant. The water quality is much better suited for the trout fishery and as a nursery for Coho smolts.

We recommend the nutrient criterion for Wildcat Lake be set at the ecoregional action value for oligotrophic Puget Lowland lakes, 10 ug/L total phosphorus.

[a] E=eutrophic, ME=mesoeutrophic, M=mesotrophic, OM=oligomesotrophic, O=oligotrophic

Chemistry Data

WILDCAT

Date	Time	Strata	Tot P (ug/L)	Tot N (mg/L)	TN:TP	Chloro-phyll (ug/L)	Fecal Col. Bacteria (#/100mL)	Hardness (mg/L)	Calcium (ug/L)	Turbidity (NTU)
Station 0										

Station 0									
6/16/1998	L				1				
	L				10				
8/18/1998	L				7				
	L				7				
9/21/1998	L				2				
	L				1				
Station 2									
6/16/1998	E	6.2	.231	37			20.7	5100	.5
	H	19.9	.374	19					
7/24/1998	E	9.2	.181	20	.71				.7 J
	H	11.9	.274	23					
8/18/1998	E	6.8	.161	24	.5 U				.6
	H	24.7	.28	11					
9/21/1998	E	8.5	.189	22	3				.6
Station 3									
6/16/1998	E	8 J							
7/24/1998	E	5.3	.176	33	1.4				
8/18/1998	E	6.6	.16	24	2.3				

Strata: L=lake surface, E=epilimnion, H=hypolimnion; Qualifier: J=Estimate, U=Less than

Watershed Survey

WILDCAT

Survey Date: 9/21/1998

Land Uses (1 = Primary, 2 = Secondary, etc.)

2	**Agriculture(commercial, not hobby)**	1	**Residential**
	Commercial, Industrial	3	**Park, forest or natural**
	Major transportation		

Impervious surfaces (Roads and parking area): No Curbs

Observations (check mark denotes presence)

BMP's ☐

No BMPs observed--possibly need to keep horses from accessing water.

Odors ☐

Cattle ☑ **Ducks** ☐ **Geese** ☐

Horses, not cattle, could possibly be entering inlet streams and freely accessing lake.

Fertilizers and weed killers appear to be used in residential or agriculture area ☑

Yes, it appears the majority of lakefront homes use lawn fertilizers.

Buffer zones around streams and wetlands ☐

Irrigation ☐

Survey Id: 50

Habitat Survey Summary Report

WILDCAT

Data are averages of ***10*** **Stations Surveyed** **Date of Visit:** 8/20/1998

Vegetation Type (Avg. only of sites w/ vegetation present; 1=coniferous, 3=deciduous)

Canopy Layer Avg:	1.7	**Number of stations with canopy:**	10
Understory Avg:	2.7	**Number of stations with understory:**	10

Percent Areal Coverage (0 = absent, 1 = <10%, 2 = 10-40%, 3 = 40-75%, 4 = >75%)

Canopy Layer:	**trees > 0.3 m DBH**	1.6
	trees< 0.3 m DBH	1.3
Understory:	**woody shrubs saplings**	1.5
	tall herbs, forbs grasses	1.2
Ground Cover:	**woody shrubs seedlings**	0.9
	herbs, forbs, grasses	2.1
	standing water or inundated veg	0.6
	barren or buildings	0.8
Substrate Type (within shoreline plot):	**bedrock**	0.0
	boulders	0.4
	cobble/gravel	0.9
	loose sand	0.8
	other fine soil/sediment	0.6
	vegetated	3.0
	other	0.8
Bank Features:	**angle (O:<30; 1: 30-75; 2:nr vertical)**	0.6
	vertical dist (M from wtrln to high wt):	0.5
	horiz. dist. (M from wtrln to high wt):	0.3

Human Influence (0 = absent, 1 = adjacent to or behind plot, 2 = present within plot)

buildings	1.0
commercial	0.0
park facilities	0.2
docks/boats	1.3
walls, dikes, or revetments	0.8
litter, trash dump, or landfill	0.0

roads or railroad	0.0
row crops	0.0
pasture or hayfield	0.2
orchard	0.0
lawn	1.3
other	0.0

Physical Habitat Characteristics

station depth (at 10 m from shore)	2.1

Bottom Substrate (0 = absent, 1 = <10%, 2 = 10-40%, 3 = 40-75%, 4 = >75%)

bedrock	0.0
boulders	0.1
cobble	0.4
gravel	0.9
sand	0.0
silt	3.8
woody debris	1.1

Macrophyte Areal Coverage (0 = absent, 1 = <10%, 2 = 10-40%, 3 = 40-75%, 4 = >75%)

submergent	1.6
emergent	1.2
floating	1.7
total weed cover	2.7
Do macrophytes extend lakeward (-1 = yes, 0 = no)	-0.5

Fish Cover (0 = absent, 1 = Present but sparse, 2 = moderate to heavy)

aquatic weeds	1.5
snags	0.2
brush or woody debris	0.7
inundated live trees	0.0
overhanging vegetation	1.1
rock ledges or sharp dropoffs	0.0
boulders	0.2
human structures	1.1

Zooplankton Report

WILKI1

Date 6/16/1998 Station: 1
Sample ID 21

Number of organisms measured: 19

Group	Percent	Group	Percent
Cladoceran	15.8%	Small < 1mm	42.1%
Copepod	84.2%	Large >= 1mm	57.9%
Other		Ratio of large to Small:	1.38
		Average size (mm):	0.86

Date 6/16/1998 Station: 3 Sample ID 8

2 mLs observed, not enough bio to sample

Number of organisms measured: 62

Group	Percent	Group	Percent
Cladoceran		Small < 1mm	93.5%
Copepod	100.0%	Large >= 1mm	6.5%
Other		Ratio of large to Small:	0.07
		Average size (mm):	0.31

Date 6/16/1998 Station: 3 Sample ID 23

12 mLs measured

Number of organisms measured: 26

Group	Percent	Group	Percent
Cladoceran	7.7%	Small < 1mm	92.3%
Copepod	92.3%	Large >= 1mm	7.7%
Other		Ratio of large to Small:	0.08
		Average size (mm):	0.44

Aquatic Plant Data

WILDCAT

Sampler: Parsons, O'Neal

Survey Date: 8/20/1998

Max depth of growth (M):

Comments Sunny, calm. Popular fishing area, many people swimming at parks, and camps. Clear water. Sediments bare gravel/muck in some areas, but most areas with macrophyte growth. Did habitat survey for Kirk Smith. Observed many bass in the shallows, kingfisher, bullfrog.

SPECIES LIST

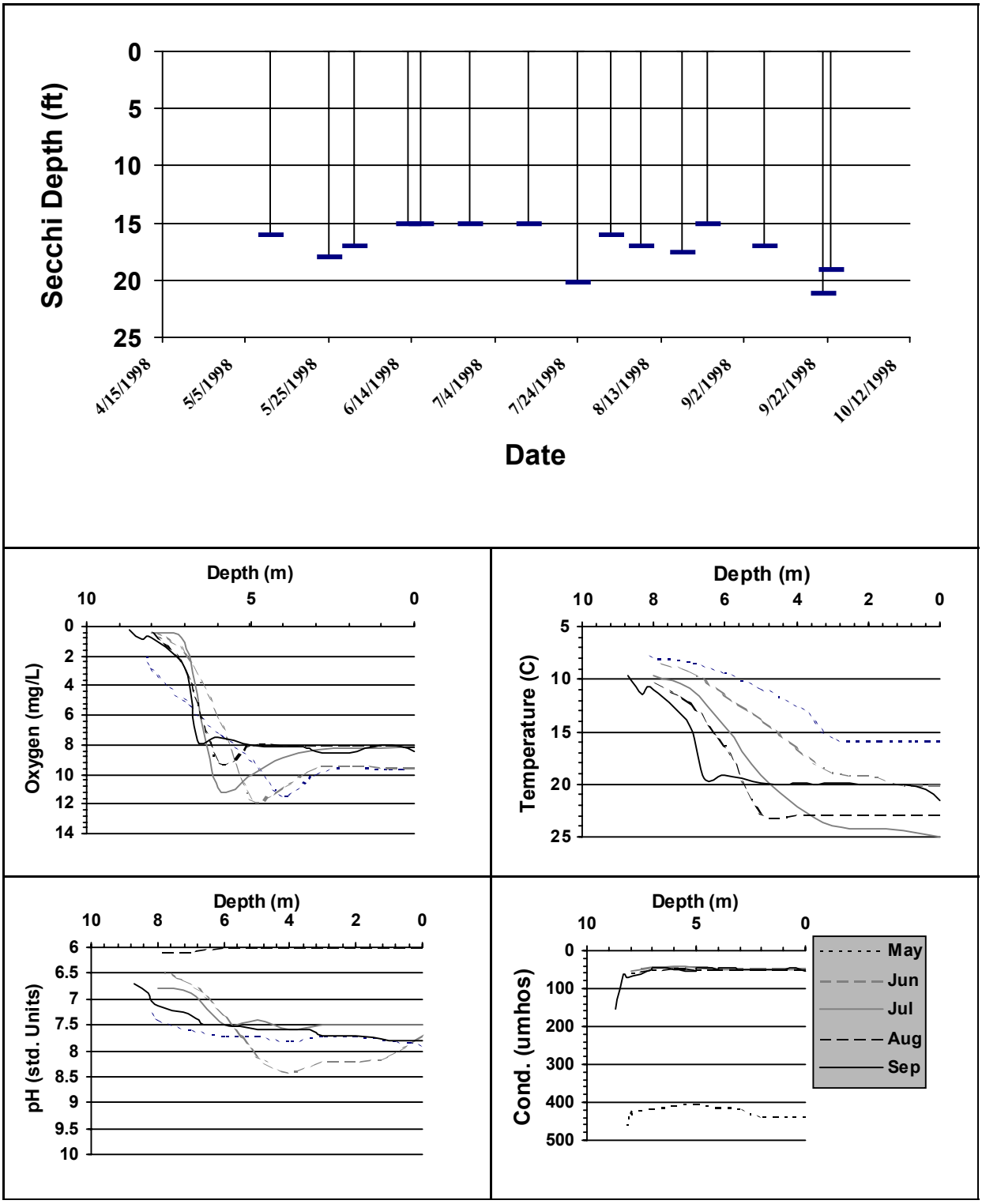
Scientific Name	Common Name	Dist [a]	Comments
Brasenia schreberi	watershield	2	
Carex sp.	sedge	2	several species on shore
Chara sp.	muskwort	1	in shallow water
Dulichium arundinaceum	Dulichium	2	
Elodea canadensis	common elodea	2	
Iris pseudacorus	yellow flag	2	
Isoetes sp.	quillwort	3	most common submersed plant
Juncus sp. or Eleocharis sp.	small grass-like plants	1	
Juncus sp.	rush	2	several species, on shore
Mentha piperita	peppermint	1	
Nuphar polysepala	spatter-dock, yellow water-lily	2	
Nymphaea odorata	fragrant waterlily	3	dense in patches

Potamogeton amplifolius	large-leaf pondweed	1	
Potamogeton gramineus	grass-leaved pondweed	2	
Potentilla palustris	purple (marsh) cinquefoil	1	
Potamogeton robbinsii	fern leaf pondweed	2	
Potamogeton sp (thin leaved)	thin leaved pondweed	2	
Potamogeton zosteriformis	eel-grass pondweed	1	few seen
Ranunculus flammula	creeping buttercup	1	
Typha latifolia	common cat-tail	2	blooming
Utricularia vulgaris	common bladderwort	1	in shallows near outlet
Vallisneria americana	water celery	2	patch on south shore

[a] 0 - value not recorded (plant may not be submersed)
1 - few plants in only 1 or a few locations
2 - few plants, but with a wide patchy distribution
3 - plants in large patches, codominant with other plants
4 - plants in nearly monospecific patches, dominant
5 - thick growth covering substrate to exclusion of other species

Secchi Depth and Profile Graphics

Station: 2 WILKI1



Secchi Data and Field Observations

WILDCAT

Date	Time	Temp-erature (F)	Secchi (ft)	Color (1-greens, 11-browns	Bright-ness (pct)	Wind (1-none, 5-gusty)	Rainfall (0-none, 5-heavy)	Aesthetics (1-bad, 5-good)	Swimming (1-poor, 5-good)	Geese (#)	Waterfowl (besides geese #)	Boats-Fishing (#)	Boats-Skiing (#)
Station 2													
5/11/1998		16.7	16	7	75	2	3	5	5	0	2	3	0
	Sampler: SNOW			Remarks: FIRST READING OF 1998.									
5/11/1998			16		0					0	0	0	0
	Sampler: BELL-MCKINNON			Remarks:									
5/25/1998		16.7	18	7	75	2	3	5	5	2		1	0
	Sampler: SNOW			Remarks: SPEED LIMIT 7 MPH ON LAKE.									
5/31/1998		20	17	6	0	1	2	5	5	30	4	7	0
	Sampler: SNOW			Remarks: 70 DEGREES IN THE SHADE.									
6/13/1998		21.1	15	7	25	1	2	5	5	0	4	2	0
	Sampler: SNOW			Remarks: TEMPERATURE IS 70 DEGREES OUTSIDE SHADE.									
6/16/1998			15	2	50					10	11	2	0
	Sampler: SMITH			Remarks: ZOOPLANKTON DUPS AT 4 METERS AT SITE #3									
6/28/1998		21.1	15	7	0	1	2	5	5	0			
	Sampler: SNOW			Remarks: 70 DEGREES IN THE SHADE.									
7/12/1998		22.2	15	7	75	1	2	5	5	30	2	4	0
	Sampler: SNOW			Remarks:									
7/24/1998			20.13	2	10					13	0	0	0
	Sampler: SMITH			Remarks:									

Date	Time	Temp-erature (F)	Secchi (ft)	Color (1-greens, 11-browns	Bright-ness (pct)	Wind (1-none, 5-gusty)	Rainfall (0-none, 5-heavy)	Aesthetics (1-bad, 5-good)	Swimming (1-poor, 5-good)	Geese (#)	Waterfowl (besides geese #)	Boats-Fishing (#)	Boats-Skiing (#)
8/1/1998		25.6	16	6	0	1	2	5	5	8	4	4	0
	Sampler: SNOW			Remarks: 68 DEGREES IN THE SHADE.									
8/8/1998		25.6	17	7	0	1	1	5	5	8	3	5	0
	Sampler: SNOW			Remarks: 72 DEGREES IN THE SHADE.									
8/18/1998			17.49	2	100			5	5	0	0	0	0
	Sampler: SMITH			Remarks: FEC#1 TAKEN AT POINT BETWEEN TWO BASINS; FEC#2 TAKEN AT BOAT RAMP. FECS TAKEN APPROX. 1230. NO BLUE-GREEN OBSERVED; UNUSUALLY CLEAR FOR THIS TIME OF YEAR. The pH results are qualified as estimates due to postcalibration failing QA/QC requirements.								
8/24/1998		23.3	15	7	0	1	1	5	5	0	0	0	0
	Sampler: SNOW			Remarks: 65 DEGREES. LAKE IS LOW.									
9/7/1998		23.3	17	8	75	1	1	5	5	6	4	3	0
	Sampler: SNOW			Remarks:									
9/21/1998			21.12	2	0	1		5	5	1	23	1	0
	Sampler: SMITH			Remarks: FEC #1 AT NEW SWIMMING AREA. The Conductivity and Oxygen results are qualified as estimates due to postcalibration failing QA/QC requirements.									
9/23/1998		21.7	19	7	0	2	1	5	5	2	8	0	0
	Sampler: SNOW			Remarks: 70 DEGREES IN THE SHADE.									
9/23/1998			19		0					0	0	0	0
	Sampler: BELL-MCKINNON			Remarks:									